

What is claimed is:

1. An isolated nucleic acid molecule encoding a polypeptide comprising amino acids 21-66 of SEQ ID NO:2, or the complement of said nucleic acid molecule.

2. The nucleic acid molecule of claim 1, wherein said molecule encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4 or SEQ ID NO:6.

3. An isolated nucleic acid molecule encoding a polypeptide comprising amino acids 21-66 of SEQ ID NO:2, or one or more substitutions relative to the amino acid sequence of SEQ ID NO:2, or the complement of said nucleic acid molecule

4. The nucleic acid molecule of claim 3, wherein one or more of said amino acid substitutions are conservative amino acid substitutions.

5. An isolated nucleic acid molecule encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:12.

6. The nucleic acid molecule of claim 5, wherein said nucleic acid comprises SEQ ID NO:11.

7. The nucleic acid of claim 1, wherein said nucleic acid comprises nucleotides 62-197 of SEQ ID NO:1.

8. An oligonucleotide less than 100 nucleotides in length comprising at least 9 contiguous nucleotides of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:11

9. A vector comprising the nucleic acid molecule of claim 1.

10. A host cell comprising the vector of claim 8.

11. A pharmaceutical composition comprising the nucleic acid molecule of claim 1 and a pharmaceutically acceptable carrier.

12. A substantially purified polypeptide comprising amino acids 21-66 of SEQ ID NO:2 or SEQ ID NO:12.

13. The polypeptide of claim 12, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:2, SEQ ID NO:4, or SEQ ID NO:6.

14. A fusion polypeptide comprising the polypeptide of claim 12 operably linked to a non-CRF2-12 polypeptide.

15. The fusion polypeptide of claim 14, wherein said non-CRF2-12 polypeptide comprises at least one member selected from the group consisting of an Fc region of an immunoglobulin molecules or a FLAG epitope, a HIS tag, and a MYC tag.

16 A pharmaceutical composition comprising the polypeptide of claim 12 and a pharmaceutically acceptable carrier.

17. An antibody that selectively binds to the polypeptide of claim 12.

18. A kit comprising in one or more containers a compound selected from the group consisting of an CRF2-12 nucleic acid, an CRF2-12 polypeptide and an antibody to an CRF2-12 polypeptide.

19. A method of producing a polypeptide, said method comprising culturing a cell comprising the nucleic acid molecule of claim 1 under conditions allowing for expression of a polypeptide encoded by said nucleic acid molecule.

20. A method of detecting the presence of a nucleic acid molecule of claim 1 in a sample, the method comprising contacting the sample with a nucleic acid probe or primer that selectively binds to the nucleic acid molecule and determining whether the nucleic acid probe or primer bound to the nucleic acid molecule of claim 1 is present in the sample.

21. A method of detecting the presence of the polypeptide of claim 12 in a sample, comprising contacting the sample with a compound that selectively binds to said polypeptide under conditions allowing for formation of a complex between said polypeptide and said compound, and detecting said complex, if present, thereby identifying said polypeptide in said sample.

22. A method of modulating the activity of the polypeptide of claim 12, the method comprising contacting a cell sample comprising said polypeptide with a compound that binds to said polypeptide in an amount sufficient to modulate the activity of the polypeptide.

23. A method of modulating the activity of interleukin-22 in a biological sample, the method comprising contacting said biological sample with the polypeptide of claim 12 in an amount sufficient to inhibit activity of IL-22 in said sample.

24. The method of claim 23, wherein said biological sample is provided in vivo.

25. A method for screening for a modulator of activity or of latency or predisposition to a cytokine-mediated immune disorder, the method comprising:

contacting a test compound with the polypeptide of claim 12; and

determining if said test compound binds to said polypeptide,

wherein binding of said test compound to said polypeptide indicates the test compound is a modulator of activity or of latency or predisposition to a cytokine-mediated immune disorder.

26. A method for screening for a modulator of activity or of latency or predisposition to a cytokine-mediated immune disorder, the method comprising:

administering a test compound to a test animal suffering from or at increased risk for said immune disorder, wherein said test animal recombinantly expresses a polypeptide encoded by the nucleic acid sequence of claim 1;

measuring expression of the activity of said polypeptide in said test animal;

measuring the activity of said polypeptide in a control animal that recombinantly expresses said polypeptide and is not at increased risk for said immune disorder; and

comparing expression of said polypeptide in said test animal and said control animal,

wherein a change in the activity of said polypeptide in said test animal relative to said control animal indicates the test compound is a modulator of latency of said immune disorder, and wherein said cytokine-mediated immune disorder is selected from the group consisting of an

autoimmune disorder, a T-lymphocyte-associated disorder, a cell-proliferation disorder, a cell differentiation disorder, and an immune deficiency order.

27. The method of claim 26, wherein said test animal is a recombinant test animal that expresses a test protein transgene or expresses said transgene under the control of a promoter at an increased level relative to a wild-type test animal, and wherein said promoter is not the native gene promoter of said transgene.

28. A method for determining the presence of or predisposition to a disease associated with altered levels of a polypeptide of claim 12 in a subject, the method comprising:

- a) measuring the amount of said polypeptide in a sample from said subject; and
- b) comparing the amount of the polypeptide in step (a) to the amount of the polypeptide present in a control sample,

wherein an alteration in the level of said polypeptide in step (a) as compared to the level of the polypeptide in said control sample indicates the presence of or predisposition to a disease in said subject.

29. The method of claim 28, wherein said subject is a human.

30. A method for determining the presence of or predisposition to a disease associated with altered levels of a nucleic acid molecule of claim 1 in a subject, the method comprising:

- a) measuring the amount of the nucleic acid in a sample from said subject; and
- b) comparing the amount of said nucleic acid in step (a) to the amount of the nucleic acid present in a control sample,

wherein an alteration in the level of said nucleic acid in step (a) as compared to the level of the nucleic acid in the control sample indicates the presence of or predisposition to said disease in said subject.

31. The method of claim 30, wherein said subject is a human.

32. A method of treating or preventing a pathological condition associated with a cytokine-mediated disorder, the method comprising administering the polypeptide of claim 12 to a subject in an amount sufficient to alleviate or prevent the pathological condition.

33. The method of claim 32, wherein said subject is a human.

34. A method of treating or preventing a pathological condition associated with an immune disorder, the method comprising administering the nucleic acid of claim 1 to a subject in an amount sufficient to treat or prevent the pathological condition.

35. The method of claim 34, wherein said subject is a human.

36. A method of treating or preventing a pathological condition, the method comprising administering the antibody of claim 16 to a subject in an amount sufficient to alleviate or prevent the pathological condition.

37. The method of claim 36, wherein said subject is a human.

38. A method of treating rheumatoid arthritis in a subject, the method comprising administering to the subject an agent that modulates the amount of a CRF2-12 polypeptide in said subject.

39. The method of claim 38, wherein said agent is a CRF2-12 nucleic acid or polypeptide.

40. The method of claim 38, wherein said subject is a human.

41. The method of claim 38, wherein said agent increases the amount of said CRF2-12 polypeptide in said subject.

42. The method of claim 38, wherein said agent decreases the amount of said CRF2-12 polypeptide in said subject.

43. The method of claim 42, wherein said agent is an anti-CRF2-12 antibody.

44. A method of treating multiple sclerosis in a subject, the method comprising administering to the subject an agent that modulates the amount of a CRF2-12 polypeptide in said subject.

45. The method of claim 44, wherein said agent is a CRF2-12 nucleic acid or polypeptide.

46. The method of claim 44, wherein said subject is a human.

47. The method of claim 44, wherein said agent increases the amount of said CRF2-12 polypeptide in said subject.

48. The method of claim 44, wherein said agent decreases the amount of said CRF2-12 polypeptide in said subject.

49. The method of claim 48, wherein said agent is an anti-CRF2-12 antibody.

50. A method of modulating vascular smooth muscle cell proliferation, the method comprising contacting a vascular smooth muscle cell with an agent that modulates the amount of CRF2-12 polypeptide in said cell.

51. The method of claim 50, wherein said agent is a CRF2-12 nucleic acid or polypeptide.

52. The method of claim 50, wherein said agent increases the amount of said CRF2-12 polypeptide in said vascular smooth muscle cell.

53. The method of claim 50, wherein said agent decreases the amount of said CRF2-12 polypeptide in said vascular smooth muscle cell.

54. The method of claim 50, wherein said agent is an anti-CRF2-12 antibody.

55. The method of claim 50, wherein said cell is provided in a subject *in vivo*.

56. The method of claim 50, wherein said subject is a human.

57. A method of treating or preventing inflammation in a subject, the method comprising administering to said subject an agent that modulates the amount of a CRF2-12 polypeptide in said subject.

58. The method of claim 57, wherein said subject is a human.

59. The method of claim 57, wherein said agent increases the amount of a CRF2-12 polypeptide in said subject.

60. The method of claim 59, wherein said agent is a CRF2-12 polypeptide.

61. The method of claim 59, wherein said agent is a CRF2-12 nucleic acid.

62. The method of claim 57, wherein said agent decreases the amount of a CRF2-12 polypeptide in said subject.

63. The method of claim 62, wherein said agent is a CRF2-12 antibody.

64. The method of claim 62, wherein said agent is a CRF2-12 anti-sense nucleic acid.